# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005


Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/CEMENT/2015-16

Date: 27.02.2016

## TEST REPORT ON CEMENT

| | | |
|---|---|---|
| * CUSTOMER | : | **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore. |
| *AGENCY | : | **Mr. K. Gopi Reddy,** No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore. |
| *NAME OF THE WORK | : | Improvements to Roads and Drains in Sainagar and other area around Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Division, Ramaswamy Palya, BBMP, Bangalore. |
| *REFERENCE | : | EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016 |
| SAMPLE ID | : | Cement |
| SAMPLE RECEIVED ON | : | 27.02.2016 |
| DATE OF TESTING | : | 27.02.2016 |

The results of the tests conducted on the cement sample are as follows:

| Sl. No | Descriptions | Test Method as per IS | Test Result | Requirements as per IS: 8112-2013 |
|---|---|---|---|---|
| 1 | Standard Consistency | IS-4031 (Part -4) 1988(RA-2009) | 28.00 % | - |
| 2 | a) Initial Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 145 Minutes | Not Less than 30 Minutes |
| | b) Final Setting Time | IS-4031 (Part -5) 1988(RA-2009) | 485 Minutes | Not More than 600 Minutes |
| 3 | Soundness by Le Chartlier Method | IS-4031 (Part-3) 1988(RA-2009) | 1 mm | Not more than 10mm |

*Information is furnished by the Customer/Representative.

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL - Accredited Laboratory as per ISO / IEC-17025 :2005**

T-2377

Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/SAND-Gradation/2015-16

## TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

: 27.02.2016

*** Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. K. Gopi Reddy,** No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore.

*** Name of Work** : Improvements to Road and Drains in Sainagar and other area around Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Division, Ramaswamy Palya, BBMP, Bangalore.

**Reference** : EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016

**Technical Reference** : IS : 2386 Part 1 - 1963 RA-2007

**Sample ID** : Fine Aggregates

**Sample Received on** : 27.02.2016

**Date of Testing** : 27.02.2016

Total Wt. of Aggregates in gms **1000**

| Is Sieve Size in mm | Cumulative Weight Passing in % | Specific Limits as per IS 383-1970 (RA- 2007) | | | |
|---|---|---|---|---|---|
| | | Zone-I | Zone-II | Zone-III | Zone-IV |
| 10 | 100 | 100 | 100 | 100 | 100 |
| 4.75 | 93.50 | 90-100 | 90-100 | 90-100 | 95-100 |
| 2.36 | 78.50 | 60-95 | 75-100 | 85-100 | 95-100 |
| 1.18 | 57.50 | 30-70 | 55-90 | 75-100 | 90-100 |
| 600 Micron | 29.50 | 15-34 | 35-59 | 60-79 | 80-100 |
| 300 Micron | 13.90 | 5-20 | 8-30 | 12-40 | 15-50 |
| 150 Micron | 4.70 | 0-10 | 0-10 | 0-10 | 0-15 |

* Information is furnished by the Customer/Representative

**Remarks :** This sample is under Zone-I specific limits.

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-237


Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/CC Solid Block/2015-16 : 27.02.2016

## TEST REPORT ON SOLID CONCRETE BLOCKS

*** Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. K. Gopi Reddy,** No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore.

*** Name of the Work** : Improvements to Road and Drains in Sainagar and other area around Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Division, Ramaswamy Palya, BBMP, Bangalore.

**Reference** : EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016

**Sample Received on** : 27.02.2016

**Date of Testing** : 27.02.2016

**Size of Blocks** : 400mm x 200mm x 200mm

**Cross Sectional Area** : 80000 $mm^2$

**Technical Reference** : IS: 2185 (Part 1) - 2005

**No. of Blocks Tested** : 08

| Sl.No. | Block ID | Wt. in Kg | Failure load (KN) | Compressive strength ($N/mm^2$) | Requirement as per IS 2185 (Part 1) - 2005 |
|---|---|---|---|---|---|
| 1 | Block 1 | 34.15 | 260.3 | 3.25 | |
| 2 | Block 2 | 35.20 | 261.2 | 3.27 | |
| 3 | Block 3 | 34.26 | 262.1 | 3.28 | |
| 4 | Block 4 | 35.10 | 260.5 | 3.26 | Minimum required Compressive Strength of Individual Units 3.20 $N/mm^2$ |
| 5 | Block 5 | 34.85 | 259.6 | 3.25 | |
| 6 | Block 6 | 35.26 | 258.4 | 3.23 | |
| 7 | Block 7 | 34.89 | 260.4 | 3.26 | |
| 8 | Block 8 | 35.15 | 261.2 | 3.27 | |

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-23

Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/CC Solid Block/2015-16

## TEST REPORT ON SOLID CONCRETE BLOCKS

: 27.02.201

*** Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. K. Gopi Reddy,** No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore.

*** Name of the Work** : Improvements to Road and Drains in Sainagar and other area around Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Division, Ramaswamy Palya, BBMP, Bangalore.

**Reference** : EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016

**Sample Received on** : 27.02.2016

**Date of Testing** : 27.02.2016

**Size of Blocks** : 400mm x 100mm x 200mm

**Cross Sectional Area** : 40000 $mm^2$

**Technical Reference** : IS: 2185 (Part 1) - 2005

**No. of Blocks Tested** : 08

| Sl.No. | Block ID | Wt. in Kg | Failure load (KN) | Compressive strength ($N/mm^2$) | Requirement as per IS 2185 (Part 1) - 2005 |
|---|---|---|---|---|---|
| 1 | Block 1 | 17.36 | 129.3 | 3.23 | Minimum required Compressive Strength of Individual Units 3.20 $N/mm^2$ |
| 2 | Block 2 | 18.26 | 130.2 | 3.26 | |
| 3 | Block 3 | 17.98 | 131.2 | 3.28 | |
| 4 | Block 4 | 18.32 | 129.6 | 3.24 | |
| 5 | Block 5 | 17.52 | 131.2 | 3.28 | |
| 6 | Block 6 | 17.96 | 130.5 | 3.26 | |
| 7 | Block 7 | 18.52 | 130.2 | 3.26 | |
| 8 | Block 8 | 17.98 | 131.8 | 3.30 | |

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# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2

Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/Kerb stone/2015-16

27.02.20

## TEST REPORT ON CONCRETE CORE (KERB STONE)

*** Name of Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP,

*** Name of Agency** : **Mr. K. Gopi Reddy,**
No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore.

*** Name of work** : Improvements to Road and Drains in Sainagar and other area around Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Division, Ramaswamy Palya, BBMP, Bangalore.

**Reference** : EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016

**Techinical Reference** : IS:516-1959 (Reaffirmed 2008), SP-24:1983.

**Sample ID** : Kerb Stone

**Sample Received on** : 27.02.2016

**Date of Testing** : 27.02.2016

| Sl. No. | Dia of Core D (mm) | Height of Core H (mm) | Core Wt (Kg) | Density of Core (kg / $m^3$) | H / D | Correction factor (Based on H/D) | Failure Load (kN) | Core Strength ($N/mm^2$) | Correction Factor for the Dia. (Strength of the Core x 1.08) | Corrected Cylinder Compressive Strength ($N/mm^2$) | Equivalent Cube Compressive Strength ($N/mm^2$) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 50.00 | 82.00 | 0.403 | 2503.00 | 1.64 | 0.960 | 25.30 | 12.89 | 13.92 | 13.36 | 16.70 |
| 2 | 50.00 | 83.00 | 0.412 | 2528.07 | 1.66 | 0.965 | 26.30 | 13.39 | 14.47 | 13.96 | 17.45 |
| 3 | 50.00 | 84.00 | 0.420 | 2546.48 | 1.68 | 0.970 | 26.80 | 13.65 | 14.74 | 14.30 | 17.87 |

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SBCNO. 204/15-16

# CIVIL-TECH CONSULTANTS AND ENGINEERS

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Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/CUBE/2014-15

## TEST REPORT ON CONCRETE CUBES

28.03.

*** Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. K. Gopi Reddy,** No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore.

*** Name of the work** : Improvements to Road and Drains in Sainagar and other area around Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Division, Ramaswamy Palya, BBMP, Bangalore.

*** Reference** : EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016

*** Sample ID** : Pavement Concrete

**Size of cubes** : 150mmx150mmx150mm

**Cross Sectional Area** : 22500 $mm^2$

**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{15}$

**Compressive Strength as o:** : $28^{th}$ day

**Sample Received on** : 28.03.2016

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 29.02.2016 | 28.03.2016 | 8.115 | 356.5 | 15.84 |
| 2 | 29.02.2016 | 28.03.2016 | 8.265 | 369.5 | 16.42 |
| 3 | 29.02.2016 | 28.03.2016 | 8.398 | 378.6 | 16.83 |

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Job No.: CTCE/BBMP/W.No.03/KGR/CSR-02/1083e/CUBE/2014-15

## TEST REPORT ON CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Yelahanka New Town Sub Division, BBM Bangalore.

*** Agency** : **Mr. K. Gopi Reddy,** No.03, 15th Cross, 15th Main, Ramachandrappa Layout, Veerannapalya, R.B.K College Post, Bangalore.

*** Name of the work** : Improvements to Road and Drains in Sainagar and other area arou Sambram college in Ward No.03 of Yelahanka Satellite Town Sub Divisio Ramaswamy Palya, BBMP, Bangalore.

*** Reference** : EE(YNK.D)E-PMT-1/W.O/42/2015-16 Dated: 27.02.2016

*** Sample ID** : Pavement Concrete

**Size of cubes** : 150mmx150mmx150mm

**Cross Sectional Area** : 22500 $mm^2$

**Technical Reference** : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : $M_{15}$

**Compressive Strength as o:** : 28th day

**Sample Received on** : 28.03.2016

| Sl.No. | Date of casting | Date of testing | Weight of cube (Kg) | Failure load (KN) | Compressive strength ($N/mm^2$) |
|---|---|---|---|---|---|
| 1 | 29.02.2016 | 28.03.2016 | 8.188 | 359.6 | 15.98 |
| 2 | 29.02.2016 | 28.03.2016 | 8.290 | 375.5 | 16.69 |
| 3 | 29.02.2016 | 28.03.2016 | 8.310 | 382.6 | 17.00 |

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